

FORM PTO-1390 (REV. 5-93)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	
<b>TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371</b>		ATTORNEY'S DOCKET NUMBER 10191/1239  U.S. APPLICATION NO. (If known, see 37 CFR 1.5) <div style="font-size: 1.5em; font-weight: bold; text-align: center;">09/508019</div>	
INTERNATIONAL APPLICATION NO. PCT/DE98/00740	INTERNATIONAL FILING DATE (13.03.98) 13 March 1998	PRIORITY DATES CLAIMED (23.09.97) 23 September 1997	
TITLE OF INVENTION <b>CAR RADIO HAVING A HANDSET</b>			
APPLICANT(S) FOR DO/EO/US <b>Wolfgang STROHMEIER</b>			
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information			
1. <input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a filing under 35 U.S.C. 371.			
2. <input type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a filing under 35 U.S.C. 371.			
3. <input checked="" type="checkbox"/> This express request to begin national examination procedures (35 U.S.C. 371(f)) immediately rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).			
4. <input checked="" type="checkbox"/> A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.			
5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2))			
a. <input type="checkbox"/> is transmitted herewith (required only if not transmitted by the International Bureau).			
b. <input checked="" type="checkbox"/> has been transmitted by the International Bureau.			
c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US)			
6. <input checked="" type="checkbox"/> A translation of the International Application into English (35 U.S.C. 371(c)(2)).			
7. <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))			
a. <input type="checkbox"/> are transmitted herewith (required only if not transmitted by the International Bureau).			
b. <input type="checkbox"/> have been transmitted by the International Bureau.			
c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.			
d. <input checked="" type="checkbox"/> have not been made and will not be made.			
8. <input type="checkbox"/> A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).			
9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).			
10. <input type="checkbox"/> A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).			
<b>Items 11. to 16. below concern other document(s) or information included:</b>			
11. <input checked="" type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.			
12. <input checked="" type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.			
13. <input checked="" type="checkbox"/> A <b>FIRST</b> preliminary amendment.			
<input type="checkbox"/> A <b>SECOND</b> or <b>SUBSEQUENT</b> preliminary amendment.			
14. <input type="checkbox"/> A substitute specification.			
15. <input type="checkbox"/> A change of power of attorney and/or address letter.			
16. <input checked="" type="checkbox"/> Other items or information: Translation of International Search Report, Translation of International Preliminary Examination Report and Form PCT/RO/101.			

Express Mail No. EL179951060US

U.S. APPLICATION NO. 09/508019  
37 C.F.R. 1.5

INTERNATIONAL APPLICATION NO.  
PCT/DE98/00740

ATTORNEY'S DOCKET NUMBER  
10191/1239

CALCULATIONS | PTO USE ONLY

17. ☒ The following fees are submitted:

**Basic National Fee (37 CFR 1.492(a)(1)-(5)):**  
 Search Report has been prepared by the EPO or JPO ..... \$840.00  
 International preliminary examination fee paid to USPTO (37 CFR 1.482) ... \$670.00  
 No international preliminary examination fee paid to USPTO (37 CFR 1.482) but  
 international search fee paid to USPTO (37 CFR 1.445(a)(2)) ..... \$690.00  
 Neither international preliminary examination fee (37 CFR 1.482) nor international  
 search fee (37 CFR 1.445(a)(2)) paid to USPTO ..... \$970.00  
 International preliminary examination fee paid to USPTO (37 CFR 1.482) and all  
 claims satisfied provisions of PCT Article 33(2)-(4) ..... \$96.00

**ENTER APPROPRIATE BASIC FEE AMOUNT =** \$ 840.00

Surcharge of \$130.00 for furnishing the oath or declaration later than ☐ 20 ☐ 30 months  
 from the earliest claimed priority date (37 CFR 1.492(e)). \$

Claims	Number Filed	Number Extra	Rate		
Total Claims	6 - 20 =	0	X \$18.00	\$ 0	
Independent Claims	1 - 3 =	0	X \$78.00	\$ 0	
Multiple dependent claim(s) (if applicable)			+ \$260.00	\$ 0	

**TOTAL OF ABOVE CALCULATIONS =** \$ 840.00

Reduction by 1/2 for filing by small entity, if applicable. Verified Small Entity statement must  
 also be filed. (Note 37 CFR 1.9, 1.27, 1.28). \$

**SUBTOTAL =** \$ 840.00

Processing fee of \$130.00 for furnishing the English translation later than ☐ 20 ☐ 30  
 months from the earliest claimed priority date (37 CFR 1.492(f)). + \$

**TOTAL NATIONAL FEE =** \$ 840.00

Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be  
 accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property + \$

**TOTAL FEES ENCLOSED =** \$ 840.00

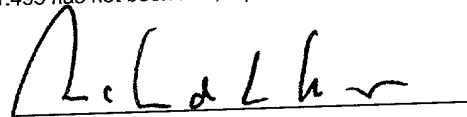
Amount to be:  
 refunded \$  
 charged \$840.00

- a. ☐ A check in the amount of \$\_\_\_\_\_ to cover the above fees is enclosed.  
 b. ☒ Please charge my Deposit Account No. 11-0600 in the amount of \$840.00 to cover the above fees. A duplicate copy of this  
 sheet is enclosed.  
 c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit  
 Account No. 11-0600. A duplicate copy of this sheet is enclosed.

**NOTE:** Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must  
 be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

Kenyon & Kenyon  
 One Broadway  
 New York, New York 10004

  
 SIGNATURE

Richard L. Mayer, Reg. No. 22,490  
 NAME  
 DATE 3/6/00

[10191/1239]

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant(s) : Wolfgang STROHMEIER  
Serial No. : To Be Assigned  
Filed : Herewith  
For : CAR RADIO HAVING A HANDSET  
Examiner : To Be Assigned  
Group Art Unit : To Be Assigned

Assistant Commissioner for Patents  
Washington, D.C. 20231

**PRELIMINARY AMENDMENT**

SIR:

Please amend the above-identified application before examination as follows:

**In The Specification:**

On page 1, before line 1, insert --Background Information--.

On page 1, line 6, change "German Utility Patent 91 09 141 U1" to --German Patent No. 91 09 141--.

On page 1, line 11, change "means" to --systems--.

On page 1, line 19, insert --Summary Of The Invention--.

On page 1, line 21, delete "mentioned in the preamble".

On page 2, line 1, change "The" to --An--.

On page 2, delete lines 24-33 and in their place insert:

**--Brief Description Of The Drawings**

Figure 1 shows a front panel of a car radio having an inserted handset in car radio mode.

Figure 2 shows the arrangement according to Figure 1 in a telephone mode.

Figure 3 shows the arrangement according to Figure 1, with the handset removed in the usual operating position for making telephone calls and with a shifted display for

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this purpose.

Figure 4 shows the arrangement according to Figure 3, with the handset viewed from the rear.

Detailed Description--.

On page 6, line 1, change "Patent Claims" to --What Is Claimed Is--.

In The Claims:

Please cancel claims 1-6, without prejudice, and add new claims 7-12 as follows:

7. (New) A car radio, comprising:

a front panel including a horizontally positioned holder;

a handset capable of functioning as one of a control unit for the car radio and a telephone, the handset being inserted into the horizontally positioned holder in the front panel;

a screen; and

control keys provided with a labeling oriented along a first axis that is rotated out of a usual vertical alignment of the handset in a mounted position by an angle between 30 and 60 degrees in a direction of a longitudinal axis of the handset in order to render the labeling easy to read in each one of a plurality of operating positions of the handset.

8. (New) The car radio according to claim 7, wherein:

the first axis of the labeling is rotated 45 degrees in relation to the direction of the longitudinal axis of the handset.

9. (New) The car radio according to claim 7, wherein:

the control keys include labeled elongated keys oriented perpendicular to the first axis of the labeling.

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10. (New) The car radio according to claim 7, wherein:  
a direction of a display on the screen is capable of being changed in order  
to adjust the screen to one of the plurality of operating positions.
11. (New) The car radio according to claim 10, wherein:  
the handset includes a position sensor for changing the display on the  
screen.
12. (New) The car radio according to claim 7, wherein:  
the handset includes a remote control unit for the car radio.

**In The Abstract:**

Delete the present Abstract and in its place insert the following:

**--Abstract Of The Disclosure**

In a car radio having a handset that is inserted into a horizontally positioned holder in a front panel and has a screen as well as labeled control keys and can be used as the control unit for a car radio or as a telephone, the use of the handset is made easier in both operating positions by orienting the labeling of the control keys along an axis that is rotated out of the usual perpendicular alignment of the handset in the mounted position by an angle between 30 and 60 degrees in the direction of the longitudinal axis of the handset, thereby making the labeling easy to read in both operating positions of the handset.--.

**Remarks**

This Preliminary Amendment cancels claims 1-6 in the underlying PCT Application No. PCT/DE98/00740, and adds new claims 7-12. The new claims do not add new matter to the application but do conform the claims to U.S. Patent and Trademark Office rules.

The amendments to the specification and abstract are to conform the specification and abstract to U.S. Patent and Trademark Office rules. The

amendments to the specification and abstract do not introduce new matter into the application.

The underlying PCT application includes a Search Report dated September 25, 1998, and an International Preliminary Examination Report dated May 3, 1999, copies of which are submitted herewith.

Applicant asserts that the present invention is new, non-obvious, and useful. Consideration and allowance of the claims are requested.

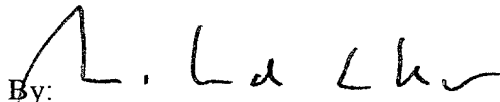
Respectfully submitted,

KENYON & KENYON

Dated:

3/6/00

By:

  
Richard L. Mayer  
Reg. No. 22,490

One Broadway  
New York, NY 10004  
(212) 425-7200

4/7/05

## CAR RADIO HAVING A HANDSET

The present invention relates to a car radio having a handset that is inserted into a horizontally positioned holder in a front panel and has a display as well as labeled control keys and can be used as the control unit for the car radio or as a telephone.

5 A car radio having a removable control unit that is simultaneously designed as a telephone handset is known from German Utility Patent 91 09 141 U1. Because the main reason for control unit removability was to protect against theft, the design of the removable control part as a telephone was intended as an additional benefit. In this arrangement, the control and display elements can be used for both purposes. The  
10 known concept has not been generally accepted because easier-to-use electronic anti-theft means have been introduced in the meantime. In addition, handling of the removable control part as a telephone is different from the handling of commonly known telephone sets. According to the current art, a physical connection is therefore no longer established between the car radio and telephone, with the telephone instead  
15 being mounted as a separate unit in a suitable location in the automobile. However, this gives rise to the problem that mounting the telephone handset in a holder, which also serves to charge the telephone handset, frequently means making compromises between functionality and design.

20 To resolve this problem, the physical connection between the car radio and telephone handset mentioned in the preamble is established according to the present invention, and to avoid the resulting handling disadvantages, the labeling of the control keys is oriented according to the present invention on an axis that is rotated out of the usual vertical direction of the handset in its mounted position by an angle between 30 and  
25 60 degrees in the direction of the handset's longitudinal axis, thereby making it easy to read the labeling when the handset is in either operating position.

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The object achieved according to the present invention enables the handset to be used comfortably both in the mounted position and in the hand-held operating position, which is largely rotated 90 degrees and in which the longitudinal axis runs in a largely vertical direction. Both operating positions are therefore rotated approximately 90

5 degrees in relation to one another. The labeling is arranged according to the present invention so that the labeling axis for the control keys is located between the two operating positions in an area surrounding the central point between the two operating positions, preferably exactly in the center. This enables the labeling to be read

10 comfortably in either operating position, with the slightly rotated labeling orientation in the two operating positions being perceived merely as a design variant. The same applies to elongated keys, which are provided to distinguish them from the functions of round keys, and are oriented perpendicular to the axis of the labeling.

15 In one especially preferred embodiment of the present invention, the direction of the display on the screen can also be shifted to adjust it to the operating position. For this purpose, the handset can be provided with a position sensor that detects the respective operating position and automatically shifts the display. Of course, manual shifting is also possible and suitable.

20 The handset according to the present invention is naturally also suitable for operating the car radio by remote control, provided it is equipped with a remote control transmitter.

25 The present invention is explained in greater detail below on the basis of one embodiment illustrated in the drawing, where:

Figure 1 shows a front panel of a car radio having an inserted handset in car radio mode;

30 Figure 2 shows the arrangement according to Figure 1 in telephone mode;

Figure 3 shows the arrangement according to Figure 1, with the handset removed in the usual operating position for making telephone calls and



with a shifted display for this purpose;

Figure 4 shows the arrangement according to Figure 3, with the handset viewed from the rear.

Figure 1 shows a front panel 1 of a car radio, which is designed in the usual manner according to standard dimensions with a width that is greater than its height. On one side of front panel 1 is an adjusting dial 2, which can be used, among other things, to adjust the car radio volume. Beneath it is a forward search key 3 and a backward search key 4, which can be used to perform a radio station search, tape fast-forward function or a skip function of a CD drive, depending on the activated audio source.

A recess 5, into which a cordless, removable handset 6 is inserted, occupies most of the width of front panel 1. Handset 6 and recess 5 have a contour that bulges outward slightly and is slightly indented on both sides in the area extending toward volume control dial 2. In the indentation area, the top and bottom portions of front panel 1 are provided with a beveled surface 7. In the upper beveled area is an elongated key 8 for unlocking handset 6 and a smaller key 9, which can be used to move entire front plate 1 downward in a motorized manner, revealing a bay for a magnetic tape deck and/or a CD player.

The handset has a screen 10 on which alphanumeric displays can appear on horizontal lines 11, as shown in Figure 1. Adjusting dial 2 can be used to control cursor or scrolling actions on screen 10. A central key 2a serves both as an ENTER key and as an OFF key (controlled by time windows).

On one side of the screen are four keys 12, which are not labeled and are used as soft keys to select, for example, stored radio stations that are displayed on four lines near keys 12 on screen 10.

On the other side of screen 10 is a numeric keypad 13 of the usual type, which includes round keys that are labeled with numbers from "1" to "0". Next to the keys on numeric keypad 13 are alphabetical key labels 14 which represent the letters that

can be selected with the corresponding key.

Alphanumeric keypad 13 is delimited at one end by a connect/activate key 15, which extends along the entire height of numeric keypad 13 and serves in the usual manner to set up and cut off phone calls, respectively.

On the side of connect/activate key 15 opposite numeric keypad 13 is a row of four adjacent elongated keys 16, which are used to influence the active mode of operation, with a BND key serving to select bands during radio operation, a DSC key to select individual basic settings, and an AUD key to select functions that influence the sound. A fourth key, SRC, is used to switch handset 6 between car radio mode, CD or tape mode, and telephone mode.

Keys 16 are elongated, oval-shaped keys and are thus distinguishable from the round keys on numeric keypad 13, which enables them to identify a different type of function. The four keys on numeric keypad 13 located directly next to screen 10 have the same function as keys 12 when handset 6 is operating in radio mode, and thus function as soft keys for making selections in conjunction with a corresponding display on screen 10.

Figure 1 shows handset 6 in car radio mode, in which station names of stored functions, for example, are displayed on screen 10.

After switching to telephone mode, which is illustrated in Figure 2, screen 10 displays, for example, stored telephone numbers i.e., corresponding names.

Figure 3 illustrates the operation of handset 6 in telephone mode after handset 6 has been removed from recess 5 in front panel 1. Because the removed handset is usually operated in a position in which the longitudinal axis of handset 6 is oriented more or less vertically—as shown in Figure 3—screen 10 is shifted so that the items displayed on screen 10 in telephone mode now appear on lines that are perpendicular to the longitudinal axis.

Figures 2 and 3 show that the key labeling on numeric keypad 13, including printed letters 14, connection control key 15, and elongated keys 16, are oriented in the direction of a central axis 17, which is rotated around an 45-degree angle, for example, in relation to longitudinal axis direction 18 of handset 6. Printed letters 14 are also arranged largely symmetrically in relation to labeling axis 17 on a circle segment. Longitudinal axis 19 of elongated keys 16 is also perpendicular to the direction of labeling axis 17, so that the labeling can extend across the greater width of longitudinal axis 16 and still be positioned symmetrically in relation to labeling axis direction 17. A telephone handset symbol 20, which is usually provided on connection control key 15, is also oriented symmetrically in relation to labeling axis direction 17.

As a result of this labeling design, the labels are always rotated no more than 45 degrees out of the vertical in the operating position of handset 6 illustrated in both Figure 2 and Figure 3 when labeling axis 17 forms a 45-degree angle with longitudinal axis 18.

In one embodiment, it can be useful to provide a slightly larger angle between axes 17, 18 illustrated in Figure 2—up to 60 degrees, for example—thus making it easier to read the labels when handset 6 is in its horizontal mounted position. This accounts for the fact that removed and hand-held handset 6 is not always carried in a completely vertical position during operation, but rather a certain inclined position, in which the handset is instinctively placed by the user, can be tolerated to improve readability.

Figure 4 shows the design of the back of handset 6, which has multiple elongated audio openings 21 for a speaker and one smaller audio opening 22 at the opposite end of handset 6 for a speaker microphone.

The representations illustrated in the drawings show that, despite the dual function of handset 6, the telephone's ease of use and legibility in both operating positions (Figures 1 and 2, respectively, and Figure 3) are on a par with those of a normal telephone handset. In addition, handset 6 according to the present invention offers an attractive design in both operating positions.

## Patent Claims

1. A car radio having a handset (6) that is inserted into a horizontally positioned holder (5) in a front panel (1) and has a screen (10) as well as labeled control keys (13, 15, 16) and can be used as the control unit for the car radio or as a telephone, characterized in that the labeling of the control keys (13, 15, 16) is oriented along an axis (17) that is rotated out of the usual vertical alignment of the handset (6) in the mounted position by an angle between 30 and 60 degrees in the direction of the longitudinal axis (18) of the handset (6), thereby making the labeling easy to read in both operating positions of the handset (6).
2. The car radio according to Claim 1, characterized in that the axis (17) of the labeling is rotated 45 degrees in relation to the longitudinal axis direction (18) of the handset (6).
3. The car radio according to Claim 1 or 2 characterized in that labeled elongated keys (16) are oriented perpendicular to the axis (17) of the labeling.
4. The car radio according to one of Claims 1 through 3, characterized in that the direction of the display on the screen (10) can be changed to adjust it to the operating position.
5. The car radio according to Claim 4, characterized in that a position sensor is provided in the handset (6) to change the display on the screen (10).
6. The car radio according to one of Claims 1 through 5, characterized in that the handset (6) is designed as a remote control unit for the car radio.

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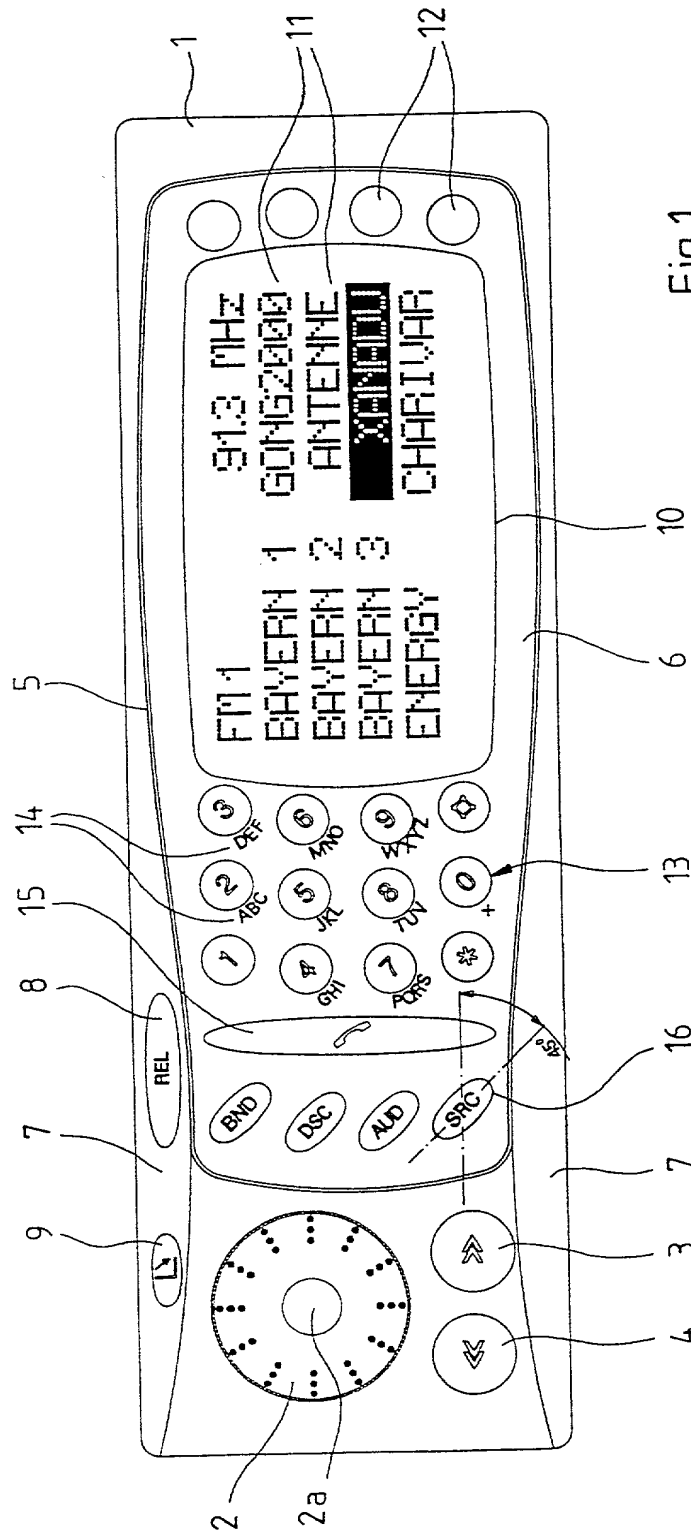


Fig. 1

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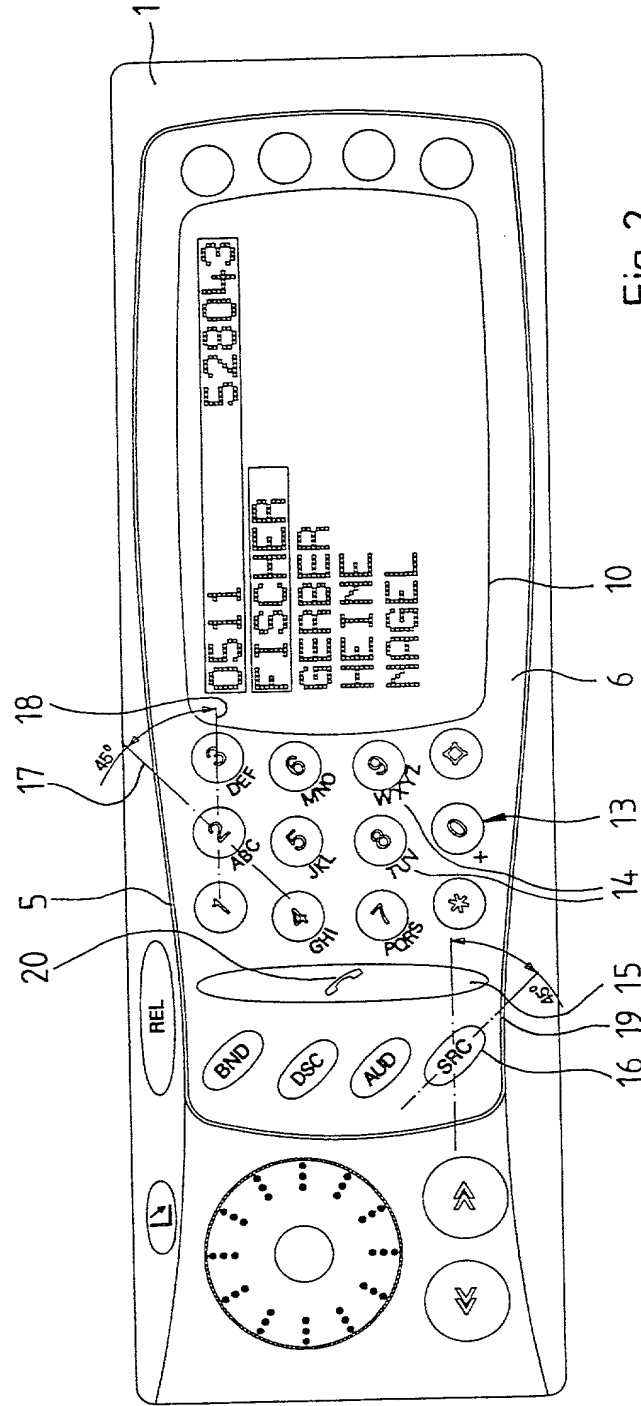


Fig. 2

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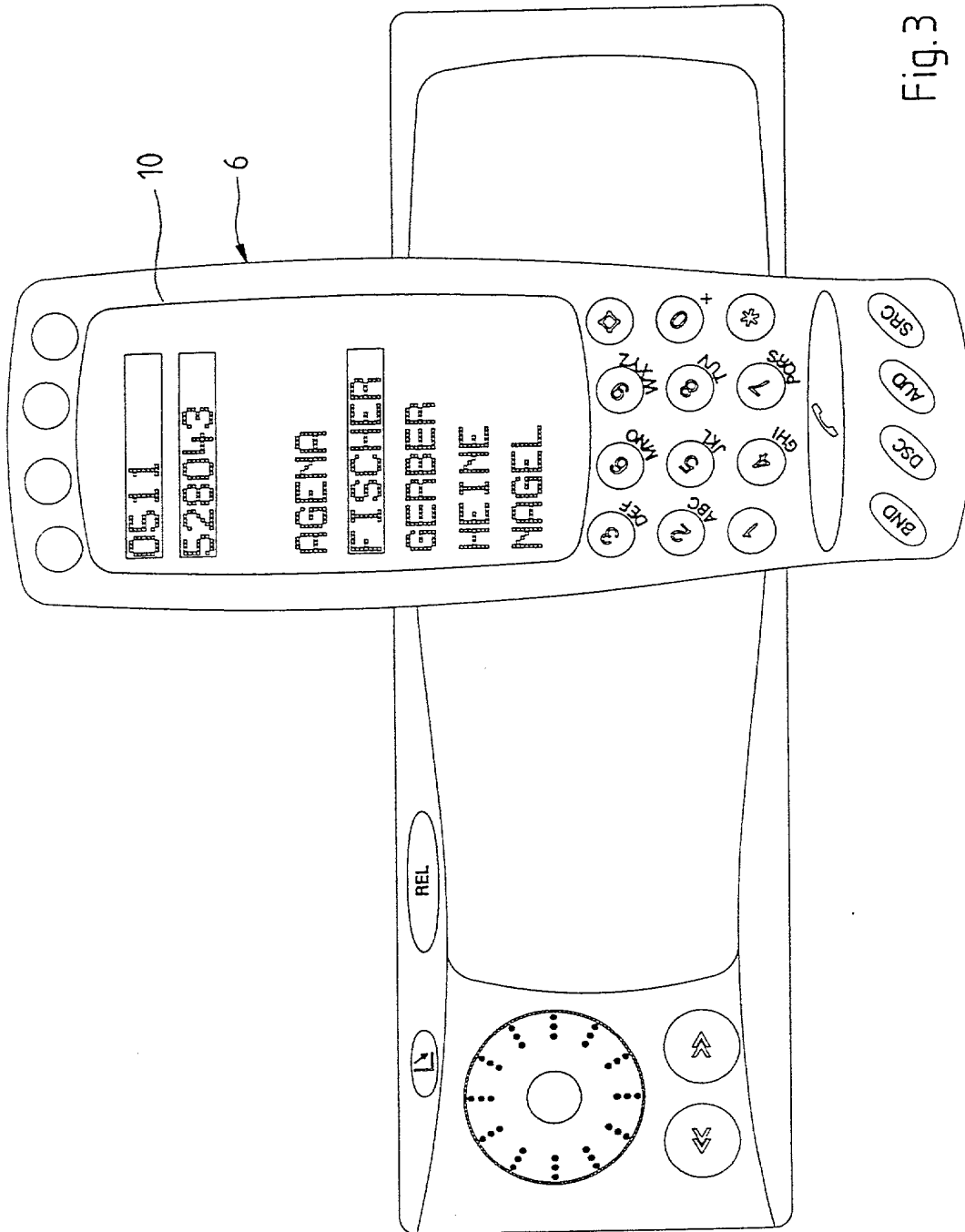


Fig. 3



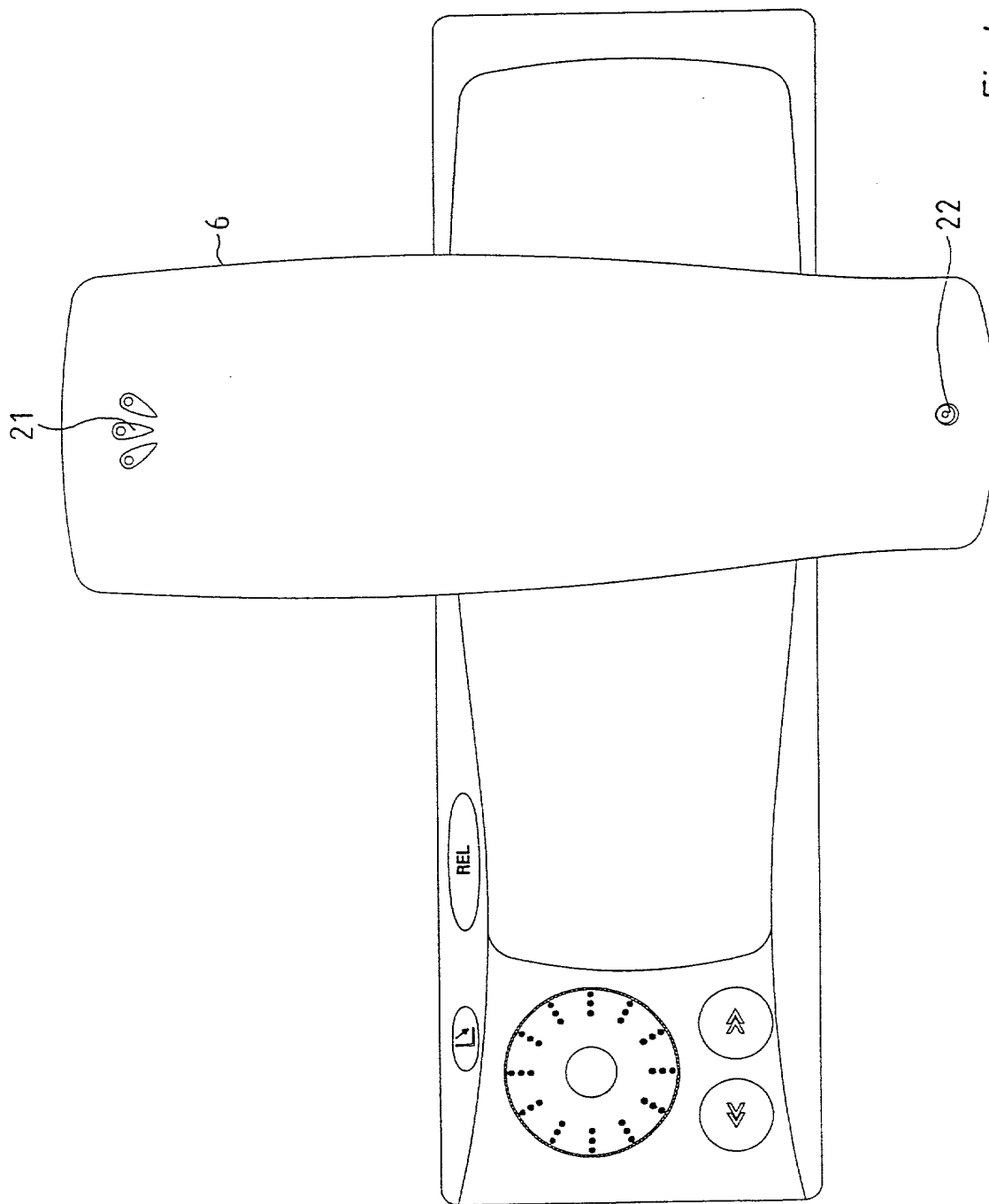


Fig.4

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## DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship  
are as stated below next to my name.

I believe I am the original, first and sole inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled **CAR RADIO HAVING A HANDSET**, the specification of which was filed as International Application No. PCT/DE98/00740 on March 13, 1998.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, § 1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, § 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application(s) for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

PRIOR FOREIGN APPLICATION(S)

Number	Country filed	Day/month/year	Priority Claimed Under 35 USC 119
197 41 854.6	Fed. Rep. of Germany	23 September 1997	Yes

2

And I hereby appoint Richard L. Mayer (Reg. No. 22,490) and Gerard A. Messina (Reg. No. 35,952) my attorneys with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith.

Please address all communications regarding this application to:

KENYON & KENYON  
One Broadway  
New York, New York 10004

Please direct all telephone calls to Richard L. Mayer at (212) 425-7200.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful and false statements may jeopardize the validity of the application or any patent issued thereon.

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Inventor: Wolfgang STROHMEIER

Inventor's Signature: Wolfgang Strohmeyer

Date: 02/02/2000

Residence: Alfriede-Marioth-Str. 12  
D-31137 Hildesheim  
Federal Republic of Germany

DEX

Citizenship: Federal Republic of Germany

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